(U.S. Patent No. 5,404,357). Claims 1-5 have been cancelled and replaced with new Claims 6-11. It is respectfully submitted that Claims 6-11 recite subject matter which is neither disclosed nor suggested in Ito.

The applicant's invention is directed to a system for recording information on a writable optical disc which offers distinct advantages over prior art devices because, as can be seen in a comparison of Figures 4a and 5a of the specification, the lead in and lead out sectors normally placed after each information data area are eliminated in the present system, such that the lead in and lead out sectors occur only once before and after, respectively, all of the data sectors on the writable disc. In place of the lead in and lead out sectors shown in the prior art structure of Figure 5a, a management information area and partition data area are used on either side of the information data area. The management information area and partition data area are much smaller than the lead in and lead out areas which bracket each of the information data areas in the prior art devices. In addition, as recited in new Claims 6-11, the old partition data area is erased whenever new information is to be written into the information recording area. Accordingly, partition data areas do not accumulate between each of the information recording areas as the disc is filled up with information data.

Claim 6 recites that a retrieving means is used first to retrieve an address of the partition area. A determining means then makes a determination of whether information exists in the partition area. If information exists in the partition area, the information in the partition area is erased by an erasing means and data is written by a writing means into an information recording area in a position after the erased partition area. In this way, a plurality of partition areas are eliminated between the information recording areas or

4

A

"chapters" (as they are alternatively referred to on page 6 of the specification), so as to minimize the space taken up between each of the recording areas. Consequently, the area available for storing information data is maximized.

Ito discloses an information writing and reading apparatus which uses an optical disk containing four separate defect management areas (DMA's), as disclosed in column 4, line 27 thereof. The apparatus disclosed in Ito is directed to providing an improved capability of carrying out a format process such that no discrepancy among the contents of the DMAs will exist due to, for example, the failure of an electric power supply. The disc management information stored in the DMAs are exactly the same so as to provide a fail safe feature. As disclosed in column 1, lines 31-32, the first two DMAs, DMA1 and DMA2, are positioned at the inner periphery of the optical disk. The second two DMAs, DMA3 and DMA4, are positioned at the outer periphery of the disk. If DMA1 is determined to be unreliable, DMA2 is detected and if DMA2 is determined to be unreliable, DMA3 is detected and so on. The rewritable information storage area is located between the inner periphery DMA2 and the outer periphery DMA3.

The data storage structure and process of Ito is completely different from the structure and function of the system recited in Claims 6-11. In column 8, line 3 of Ito, reference is made to Figure 6 which provides a flowchart to outline the steps used in formatting the optical disk. As is disclosed in column 8, line 24, step 603 shown in Figure 6 discloses the microcontroller 1 erasing all of the data of the DMA areas in numerical order. In step 604, the determination is made whether a bad sector is detected during the erasing of the data at the DMA areas. If a bad sector is detected, the program goes to step 611 to indicate the format error and to terminate the formatting. On the other hand, if no

5

bad sector is detected, the program goes to step 605 shown in Figure 6. The defect sectors detected during the formatting is temporarily stored in DMA data buffer 7 as the PDL of DMA data.

However, in the formatting process disclosed in Ito, there is no disclosure of a determining means for determining whether information exists in a partition area as recited in Claim 6. The partition area is recited in Claim 6 of the present application to be an area for indicating a data writing finish position. On the other hand, the DMA areas contain only defect management data. In addition, the formatting process shown in Ito does not disclose or suggest a retrieving means for retrieving an address of a partition area as is particularly recited in Claim 6. As discussed above, each of the four DMA areas of Ito bracket the writable area of the optical disc, and the data written in each is identical as a fail-safe measure. However, there is only one partition area at any one time at the end of the information area of the present invention, as recited in Claim 6 and shown in Fig. 4a. Accordingly, the structure set out in Ito is completely different from the structure recited in Claim 6 wherein the partition area is recited to be positioned at the end of an information recording area and each previous partition area is overwritten with predetermined data to indicate erasure as recited in Claim 10.

As disclosed in column 16 beginning with line 9 of Ito, a flowchart for normal data writing is illustrated in Figure 8. As can be seen in column 16, lines 9-65, when normal data writing is performed, data previously stored in the sectors with a received address are erased as shown in step 802. If any defect sectors are detected, the address of the defect sectors and the address of substitute sectors are stored in the SDL as new entries in DMA data buffer 7. Later, the number of DMAs that have no defective sectors is detected. If the

6

number of defective DMAs is equal to or greater than a previously determined number, the optical disk is deemed to be acceptable. Subsequently, all the SDL data are deleted from the DMAs on the disk.

However, the process shown in Figure 8 for writing normal data to the optical disk in Ito is completely different than the process performed by the structure recited in new Claim 6 in which a retrieving means retrieves an address for a partition area, a determining means determines whether information exists in the partition area, and an erasing means erases information written in the partition area if the information exists. In the claimed system for recording information on a writable optical disc, a single partition area is adjacent to the information recording area and is first erased before new information is recorded in an information recording area, after which a new partition data is recorded into a new partition area after the information recording area.

In contrast, the DMA sectors disclosed in Ito remain at the inner and outer peripheries of the optical disk, and these DMA sectors are not partition areas for indicating a data writing finish position as is specifically recited in Claim 6 but, rather, are used to store defect management data.

Accordingly, the apparatus and method disclosed in Ito would not disclose or suggest to one skilled in the art the system recited in Claims 6-11 in which the partition area which indicates a writing finish position is maintained only at the end of the information recording area so as to reduce the amount of space on the optical disc taken up by lead in and lead out areas. Therefore, it is respectfully requested that this rejection be withdrawn.
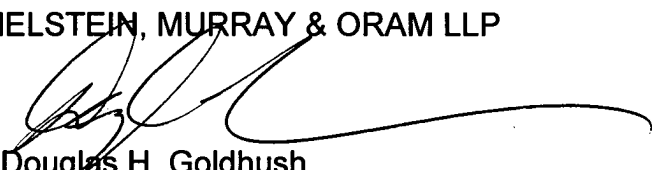
In view of the above, applicant submits that Claims 6-11 recite subject matter which

7

is neither disclosed nor suggested in Ito. It is respectfully submitted that this subject matter is more than sufficient to render Claims 6-11 unobvious to a person of skill in the art. It is respectfully requested, therefore, that Claims 6-11 be found allowable and that this application be passed to issue.

In the event that this paper is not timely filed, the applicant hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 14-1060, along with any other additional fees which may be required with respect to this paper.

Respectfully submitted,

NIKAIDO, MARMELSTEIN, MURRAY & ORAM LLP

Douglas H. Goldhush
Attorney for Applicant
Reg. No. 33,125

Atty. Docket No. P7156-6021

Metropolitan Square
655 15th Street, N. W.
Suite 330 - G Street Lobby
Washington, D. C. 20005-5701
Tel: (202) 638-5000

DHG:DDB:lad

Enclosure: Petition for Extension of Time